N61165.AR.005725
CNC CHARLESTON
5090.3a

UNDERGROUND STORAGE TANK (UST) ASSESSMENT REPORT FOR BUILDING 650
CNC CHARLESTON SC
10/04/1996
SOUTH CAROLINA DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL

L 3.11.97
LO 32557 RW

South Carolina Department of Health and Environmental Control (S.C.D.H.E.C.)
Underground Storage Tank (UST) Assessment Report

RECEIVED
FEB 07 1997
Groundwater Assessment and Development Section

Date Received
State Use Only

Submit Completed Form to:
UST Regulatory Section
SCDHEC
2600 Bull Street
Columbia, South Carolina 29201
Telephone (803) 734-5331

I OWNERSHIP OF UST(S)

Agency/Owner: Southern Division, Naval Facilities Engineering Command, Caretaker Site Office

Mailing Address: P.O. Box 190010

City: N. Charleston State: SC Zip Code: 29419-9010

Area Code: 803 Telephone Number: 743-9985 Contact Person: LCDR Paul Rose

II SITE IDENTIFICATION AND LOCATION

Site I.D. #: Unregulated

Facility Name: Charleston Naval Base Complex, Building 650 17781

Street Address: Halsey Street

City: North Charleston, 29405-2413 County: Charleston

III CLOSURE INFORMATION

Closure Started: 27 Sept 1996 Closure Completed: 4 Oct 1996

Number of USTs Closed: 1

N/A — Consultant

SPORTENVDETCHASN — UST Removal Contractor

IV. CERTIFICATION (Read and Sign after completing entire submittal)

I certify that I have personally examined and am familiar with the information submitted in this and all attached documents; and that based on my inquiry of those individuals responsible for obtaining this information, I believe that the submitted information is true, accurate and complete.

LCDR Paul Rose
Name (Type or Print)

Signature

V. UST INFORMATION

	Tank 1	Tank 2	Tank 3	Tank 4	Tank 5	Tank 6
A. Product	Fuel oil					
B. Capacity	1,000 gal.					
C. Age	1969					
D. Construction Material	Steel					
E. Month/Year of Last Use	Unk.					
F. Depth (ft.) To Base of Tank	6'					
G. Spill Prevention Equipment Y/N	N					
H. Overfill Prevention Equipment Y/N	N					
I. Method of Closure Removed/Filled	R					
J. Visible Corrosion or Pitting Y/N	N					
K. Visible Holes Y/N	N					

L. Method of disposal for any USTs removed from the ground (attach disposal manifests)

UST 650 was removed, drained, cut open at both ends, and cleaned with a steam cleaner. It was then cut up for recycling as scrap metal. (See Attachment III.)

M. Method of disposal for any liquid petroleum, sludges, or waste waters removed from the USTs (attach disposal manifests)

The residual fuel oil, waste water, and sludge were recycled.

N. If any corrosion, pitting, or holes were observed, describe the location and extent for each UST

UST 650 had a protective coating on its exterior surface. The tank was in good condition, and suffered no corrosion, holes, or pits.

VI. PIPING INFORMATION

	Tank 1	Tank 2	Tank 3	Tank 4	Tank 5
A. Construction Material.....	Copper & steel				
B. Distance from UST to Dispenser.....	24'				
C. Number of Dispensers.....	1 (see note 1)				
D. Type of System P/S.....	S				
E. Was Piping Removed from the Ground? Y/N....	Y				
F. Visible Corrosion or Pitting Y/N.....	Y				
G. Visible Holes Y/N.....	N				
H. Age.....	1969				

Note 1: UST 650 provided fuel oil to building 650's boiler.

I. If any corrosion, pitting, or holes were observed, describe the location and extent for each line.

The 3/8" copper supply and return lines were in good condition. The 2" steel vent line was corroded throughout its length, but contained no holes or pits.

VII. BRIEF SITE DESCRIPTION AND HISTORY

Building 650 is the former post office for Naval Base Charleston. UST 650 provided fuel oil to the facility's boiler.

There was a slight sheen on the groundwater in the tank pit. Soil and groundwater samples showed levels of Polynuclear Aromatic Hydrocarbons (PAHs) above the risk based screening levels (RBSLs) established in the "Risk Based Corrective Action (RBCA) for Petroleum Releases". No hole could be found in the tank on site or during cleaning operations, so the petroleum contamination is most probably due to overspill during past fillings.

The bermed soil excavated from the tank pit had elevated PAH levels, the levels were below the RBCA RBSLs, and the soil was returned to the pit.

VIII. SITE CONDITIONS

		Yes	No	Unk
A.	Were any petroleum-stained or contaminated soils found in the UST excavation, soil borings, trenches, or monitoring wells? If yes, indicate depth and location on the site map.		X	
B.	Were any petroleum odors detected in the excavation, soil borings, trenches, or monitoring wells? If yes, indicate location on site map and describe the odor (strong, mild, etc.)		X	
C.	Was water present in the UST excavation, soil borings, or trenches? If yes, how far below land surface (indicate location and depth)? Bottom center of tank excavation, 6' deep	X		
D.	Did contaminated soils remain stockpiled on site after closure? If yes, indicate the stockpile location on the site map. Name of DHEC representative authorizing soil removal: [*see note 2]		*X	
E.	Was a petroleum sheen or free product detected on any excavation or boring waters? [*see note 3] If yes, indicate location and thickness on the site map.	*X		

Note 2: Angular rock was used to fill the area covered by the groundwater. Geofabric was laid over the rock and then all soil from the excavation was returned to the tank pit.

Note 3: The groundwater had a light product sheen. This was collected with absorbent rags.

IX. SAMPLE INFORMATION

S.C.D.H.E.C. Lab Certification Number 10120

Sample #	Location	Sample Type (Soil/Water)	Depth*	Date/Time of Collection	Collected By	OVA#
SPORT 0191-1	South end of excavation.	Soil	6'	2 Oct 96 1015	R. Adkins	Not Taken
SPORT 0191-2	North end of excavation.	Soil	6'	2 Oct 96 1015	R. Adkins	Not Taken
SPORT 0191-3	Center of excavation	Water	6'	2 Oct 96 1015	R. Adkins	Not Taken
SPORT 0191-4	Vent line trough.	Soil	2'	2 Oct 96 1015	R. Adkins	Not Taken
SPORT 0191-5	Supply & return lines trough.	Soil	1'	2 Oct 96 1015	R. Adkins	Not Taken
SPORT 0191-6	Dirt pile.	Soil	-	2 Oct 96 1015	R. Adkins	Not Taken

* = Depth Below the Surrounding Land Surface

X. SAMPLING METHODOLOGY

Provide a detailed description of the methods used to collect and store (preserve) the samples.

After the removal of UST 650 soil and ground water samples were taken. Sampling was performed in accordance with SC DHEC R.61-92 Part 280 and SC DHEC UST Assessment Guidelines.

The samples are identified as follows:

	Detachment Charleston		General Engineering Labs
Soil Sample	UST650-1	=	SPORT 0191-1
Soil Sample	UST650-2	=	SPORT 0191-2
Ground Water Sample	UST650-3	=	SPORT 0191-3
Soil Sample	UST650-4	=	SPORT 0191-4
Soil Sample	UST650-5	=	SPORT 0191-5
Soil Sample	UST650-6	=	SPORT 0191-6

Sample jars were prepared by the testing laboratory. The grab method was utilized to fill the sample containers leaving as little head space as possible and immediately capped. Soil samples were extracted at the tank ends just above the ground water level. UST piping soil samples were taken under the piping at the mechanical connections. Ground water samples were taken at the bottom center of the excavation.

The samples were marked, logged, and immediately placed in sample coolers packed with ice to maintain an approximate temperature of 4° C. Tools were thoroughly cleaned and decontaminated with organic-free soap and water after each sample.

The samples remained in the custody of SPORTENVDETCHASN until they were transferred to General Engineering Laboratories for analysis as documented in the attached Chain-of-Custody Record.

XI. RECEPTORS

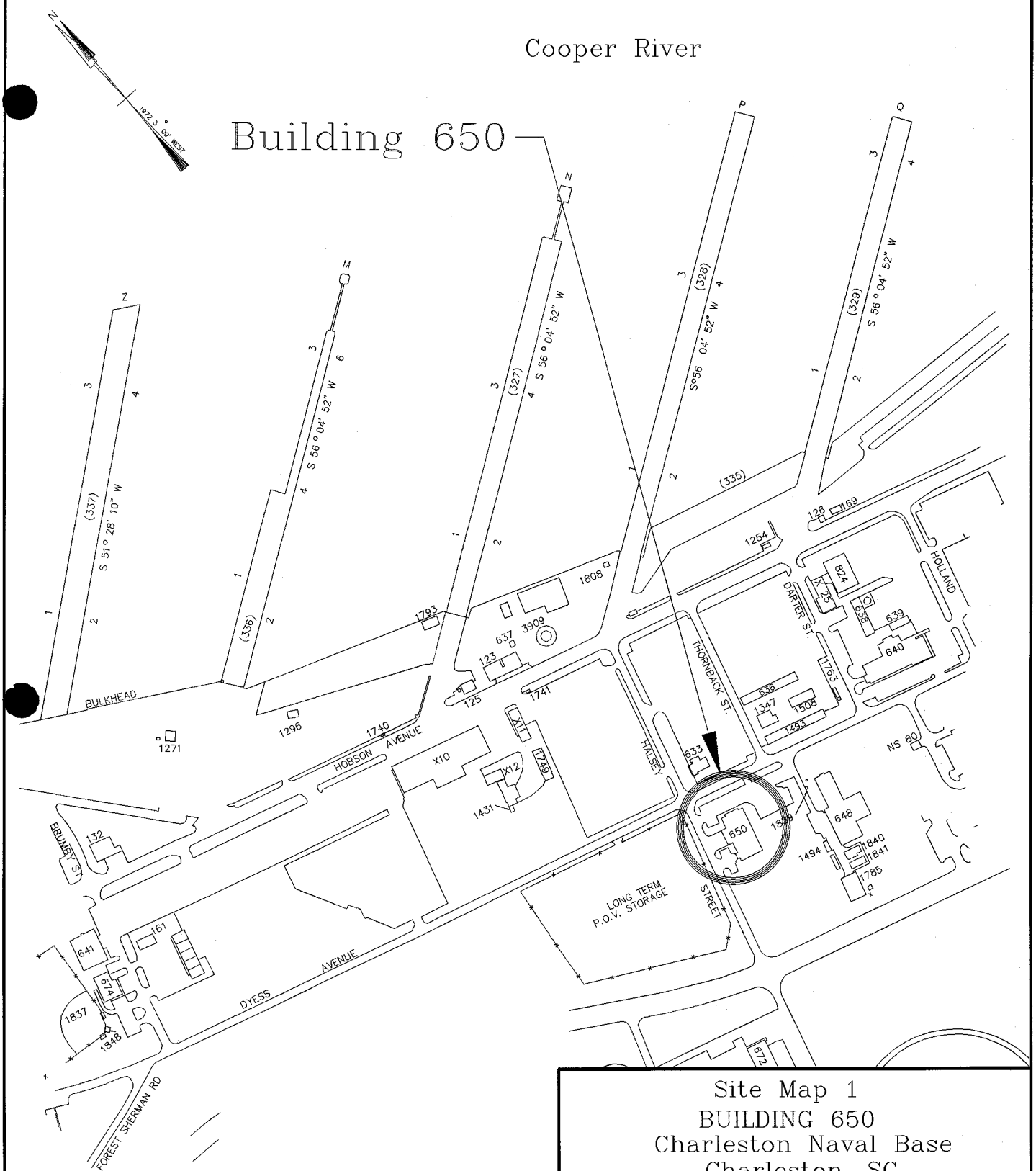
		Yes	No
A.	Are there any lakes, ponds, streams, or wetlands located within 1000 feet of the UST system? [*Cooper R. 946'] If yes, indicate type of receptor, distance, and direction on site map.	*X	
B.	Are there any public, private, or irrigation water supply wells within 1000 feet of the UST system? If yes, indicate type of well, distance, and direction on site map.		X
C.	Are there any underground structures (e.g., basements) located within 100 feet of the UST system? If yes, indicate the type of structure, distance, and direction on site map.		X
D.	Are there any underground utilities (e.g., telephone, electricity, gas, water, sewer, storm drain) located within 100 feet of the UST system that could potentially come in contact with the contamination? [*Sewer & electricity] If yes, indicate the type of utility, distance, and direction on the site map.	*X	
E.	Has contaminated soil been identified at a depth of less than 3 feet below land surface in an area that is not capped by asphalt or concrete? If yes, indicate the area of contaminated soil on the site map.		X

Attachment I

SITE MAP

You must supply a scaled site map. It should include all buildings, road names, utilities, tank and pump island locations, sample locations, extent of excavation, and any other pertinent information.

Site Maps 1, 2, and 3
Photographs 1, 2, 3, and 4



CHARLESTON NAVAL BASE
CHARLESTON, SC

300 0 300 600

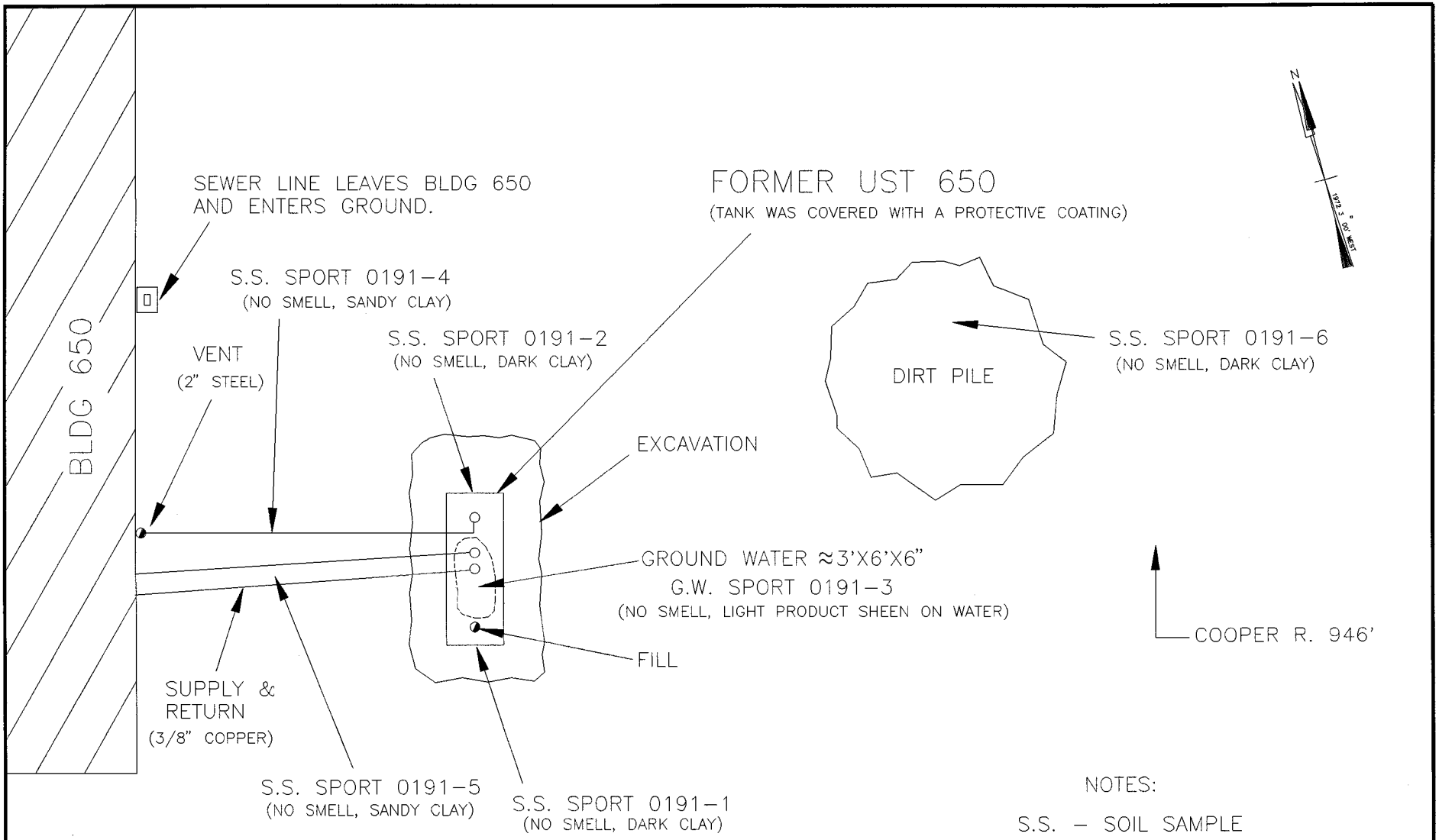
GRAPHIC SCALE

Site Map 1
BUILDING 650
Charleston Naval Base
Charleston, SC

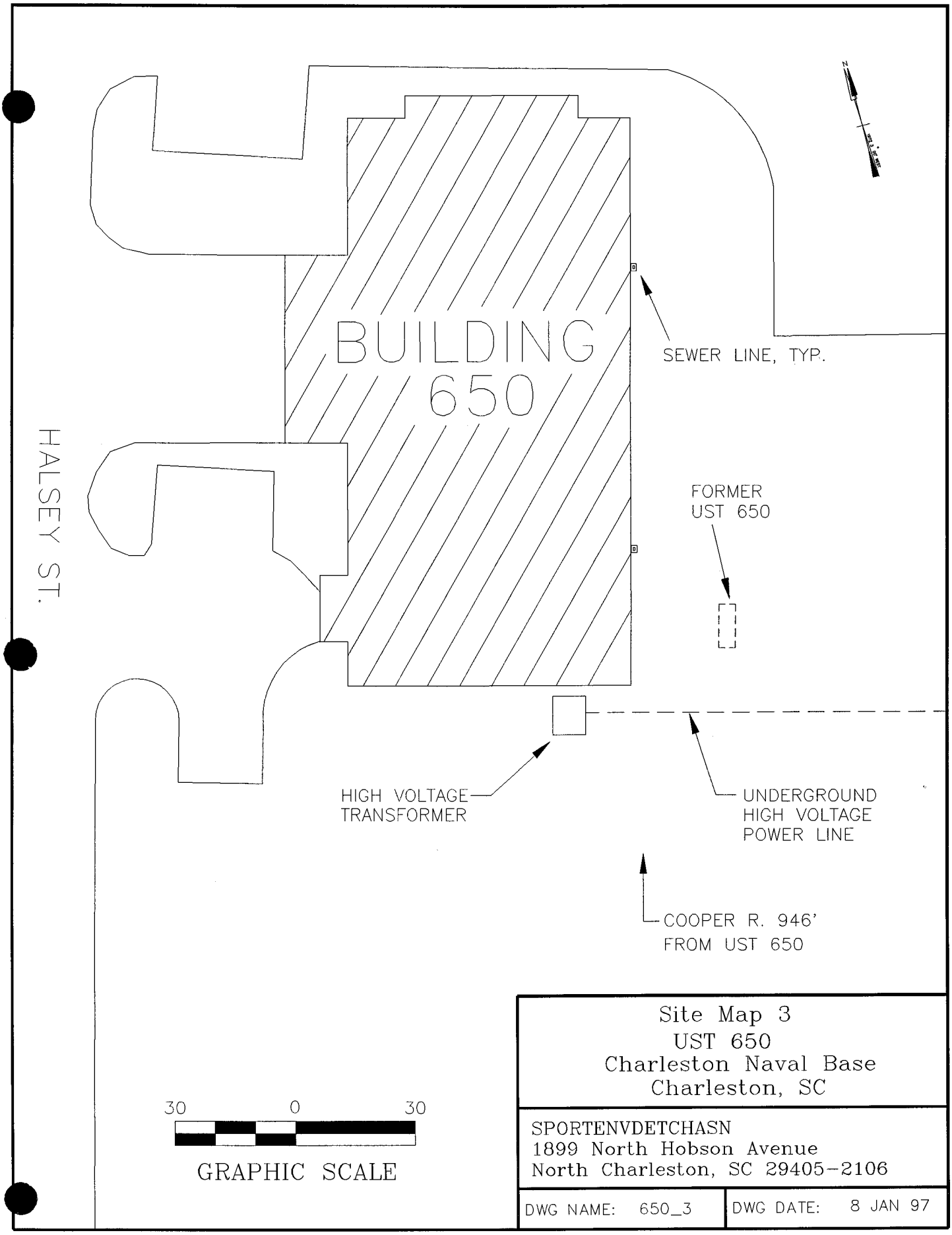
SPORTENVDETCHASN
1899 North Hobson Avenue
North Charleston, SC 29405-2106

DWG NAME: 650_1

DWG DATE: 8 JAN 97



Site Map 2 UST 650 Charleston Naval Base Charleston, SC	SPORTENVDETCHASN 1899 North Hobson Avenue North Charleston, SC 29405-2106
	DWG DATE: 9 JAN 97 / DWG NAME: 650_2



Site Map 3
UST 650
Charleston Naval Base
Charleston, SC

SPORTENVDETCHASN
1899 North Hobson Avenue
North Charleston, SC 29405-2106

DWG NAME: 650_3	DWG DATE: 8 JAN 97

UST 650

Photo 1: UST 650 partially exposed.

Photo 2: UST 650 being hoisted from the excavation. Note ground water.

Photo 3: UST 650 after removal. Note protective coating.

Photo 4: UST 650 being cut and cleaned.

Attachment II

ANALYTICAL RESULTS

You must submit the laboratory report and chain-of-custody form for the samples. These samples must be analyzed by a South Carolina certified laboratory.

Certified Analytical Results
Chain-of-Custody

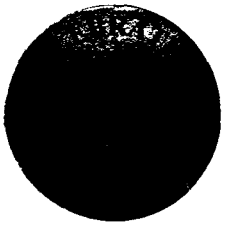
GENERAL ENGINEERING LABORATORIES

Meeting today's needs with a vision for tomorrow.

Laboratory Certifications

STATE	GEL	EPI
FL	E87156/87294	E87472/87458
NC	233	
SC	10120	10582
TN	02934	02934

Client: Supervisor of Ship Building & Conversion
SUPSHIP-Portsmouth Detachment-Env.
1899 North Hobson Ave.
North Charleston, South Carolina 29405-2106
Contact: Mr. Bill Hiers
Project Description: SUPSHIP-Portsmouth Detachment



cc: NPWC00196 Report Date: October 14, 1996

Sample ID	: SPORT0191-1
Lab ID	: 9610069-01
Matrix	: Soil
Date Collected	: 10/02/96
Date Received	: 10/02/96
Priority	: Routine
Collector	: Client

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	M
Volatile Organics											
BTEX - 4 items											
Benzene	U	0.00	1.00	2.00	ug/kg	1.0	JGS2	10/09/96	1918	92006	1
Ethylbenzene	U	0.00	1.00	2.00	ug/kg	1.0					
Toluene	U	0.00	1.00	2.00	ug/kg	1.0					
Xylenes (TOTAL)	U	0.00	1.00	4.00	ug/kg	1.0					
Naphthalene		2.50	1.00	2.00	ug/kg	1.0					
Extractable Organics											
Polynuclear Aromatic Hydrocarbons - 16 items											
Acenaphthene	U	0.00	166	331	ug/kg	1.0	BDG	10/10/96	2241	91877	2
Acenaphthylene	U	0.00	166	331	ug/kg	1.0					
Anthracene	J	205	166	331	ug/kg	1.0					
Benzo(a)anthracene		463	166	331	ug/kg	1.0					
Benzo(a)pyrene		351	166	331	ug/kg	1.0					
Benzo(b)fluoranthene		470	166	331	ug/kg	1.0					
Benzo(ghi)perylene	J	291	166	331	ug/kg	1.0					
Benzo(k)fluoranthene	J	192	166	331	ug/kg	1.0					
Chrysene		444	166	331	ug/kg	1.0					
Dibenzo(a,h)anthracene	U	0.00	166	331	ug/kg	1.0					
Fluoranthene		1610	166	331	ug/kg	1.0					
Fluorene	U	0.00	166	331	ug/kg	1.0					
Indeno(1,2,3-c,d)pyrene	J	301	166	331	ug/kg	1.0					
Naphthalene	U	0.00	166	331	ug/kg	1.0					
Phenanthrene	J	311	166	331	ug/kg	1.0					
Pyrene		1420	166	331	ug/kg	1.0					

The following prep procedures were performed:
GC/MS Base/Neutral Compounds DDT 10/08/96 2345 91877 3

P O Box 30712 • Charleston, SC 29417 • 2040 Savage Road • 29414
(803) 556-8171 • Fax (803) 766-1178

Printed on recycled paper.

9610069-01

GENERAL ENGINEERING LABORATORIES

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Laboratory Certifications

STATE	GEL	EPI
FL	E87156/87294	E87472/87458
NC	233	
SC	10120	10582
TN	02934	02934

Client: Supervisor of Ship Building & Conversion
SUPSHIP-Portsmouth Detachment-Env.
1899 North Hobson Ave.
North Charleston, South Carolina 29405-2106
Contact: Mr. Bill Hiers
Project Description: SUPSHIP-Portsmouth Detachment

cc: NPWC00196 Report Date: October 14, 1996

Sample ID : SPORT0191-1

Surrogate Recovery	Test	Percent%	Acceptable Limits
2-Fluorobiphenyl	M610	83.0	(30.0 - 115.)
Nitrobenzene-d5	M610	63.9	(23.0 - 120.)
p-Terphenyl-d14	M610	93.0	(37.3 - 128.)
Bromofluorobenzene	BTEX-8260	118.	(59.7 - 159.)
Dibromofluoromethane	BTEX-8260	113.	(74.0 - 128.)
Toluene-d8	BTEX-8260	113.	(53.4 - 163.)
Bromofluorobenzene	NAP-8260	118.	(59.7 - 159.)
Dibromofluoromethane	NAP-8260	113.	(74.0 - 128.)
Toluene-d8	NAP-8260	113.	(53.4 - 163.)

M = Method	Method-Description
M 1	EPA 8260
M 2	EPA 8270
M 3	EPA 3550

Notes:
The qualifiers in this report are defined as follows:
ND indicates that the analyte was not detected at a concentration greater than the detection limit.
J indicates presence of analyte at a concentration less than the reporting limit (RL) and greater than the detection limit (DL).
U indicates that the analyte was not detected at a concentration greater than the detection limit.
* indicates that a quality control analyte recovery is outside of specified acceptance criteria.

This data report has been prepared and reviewed
in accordance with General Engineering Laboratories
standard operating procedures. Please direct
any questions to your Project Manager, Karen Blakeney at (803) 769-7386.

Karen Blakeney
Reviewed By

GENERAL ENGINEERING LABORATORIES

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Laboratory Certifications

STATE	GEL	EPI
FL	E87156/87294	E87472/87458
NC	233	
SC	10120	10582
TN	02934	02934

Client: Supervisor of Ship Building & Conversion
SUPSHIP-Portsmouth Detachment-Env.
1899 North Hobson Ave.
North Charleston, South Carolina 29405-2106
Contact: Mr. Bill Hiers
Project Description: SUPSHIP-Portsmouth Detachment

cc: NPWC00196 Report Date: October 14, 1996

Sample ID	: SPORT0191-2
Lab ID	: 9610069-02
Matrix	: Soil
Date Collected	: 10/02/96
Date Received	: 10/02/96
Priority	: Routine
Collector	: Client

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	M
Volatile Organics											
BTEX - 4 items											
Benzene	U	0.00	1.00	2.00	ug/kg	1.0	JGS2	10/09/96	1848	92006	1
Ethylbenzene	U	0.00	1.00	2.00	ug/kg	1.0					
Toluene	U	0.730	1.00	2.00	ug/kg	1.0					
Xylenes (TOTAL)	U	0.00	1.00	4.00	ug/kg	1.0					
Naphthalene	J	1.57	1.00	2.00	ug/kg	1.0					
Extractable Organics											
Polynuclear Aromatic Hydrocarbons - 16 items											
Acenaphthene		715	164	330	ug/kg	1.0	BDG	10/10/96	2314	91877	2
Acenaphthylene	U	0.00	164	330	ug/kg	1.0					
Anthracene		787	164	330	ug/kg	1.0					
Benzo(a)anthracene		1520	164	330	ug/kg	1.0					
Benzo(a)pyrene		1190	164	330	ug/kg	1.0					
Benzo(b)fluoranthene		1440	164	330	ug/kg	1.0					
Benzo(ghi)perylene		718	164	330	ug/kg	1.0					
Benzo(k)fluoranthene		663	164	330	ug/kg	1.0					
Chrysene		1570	164	330	ug/kg	1.0					
Dibenzo(a,h)anthracene	J	285	164	330	ug/kg	1.0					
Fluoranthene		2890	164	330	ug/kg	1.0					
Fluorene		380	164	330	ug/kg	1.0					
Indeno(1,2,3-c,d)pyrene		784	164	330	ug/kg	1.0					
Naphthalene	U	0.00	164	330	ug/kg	1.0					
Phenanthrene		1590	164	330	ug/kg	1.0					
Pyrene		3120	164	330	ug/kg	1.0					

The following prep procedures were performed:
GC/MS Base/Neutral Compounds DDT 10/08/96 2345 91877 3

GENERAL ENGINEERING LABORATORIES

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Laboratory Certifications

STATE	GEL	EPI
FL	E87156/87294	E87472/87458
NC	233	
SC	10120	10582
TN	02934	02934

Client: Supervisor of Ship Building & Conversion
SUPSHIP-Portsmouth Detachment-Env.
1899 North Hobson Ave.
North Charleston, South Carolina 29405-2106
Contact: Mr. Bill Hiers
Project Description: SUPSHIP-Portsmouth Detachment

cc: NPWC00196 Report Date: October 14, 1996

Sample ID : SPORT0191-2

Surrogate Recovery	Test	Percent%	Acceptable Limits
2-Fluorobiphenyl	M610	87.0	(30.0 - 115.)
Nitrobenzene-d5	M610	49.4	(23.0 - 120.)
p-Terphenyl-d14	M610	109.	(37.3 - 128.)
Bromofluorobenzene	BTEX-8260	123.	(59.7 - 159.)
Dibromofluoromethane	BTEX-8260	115.	(74.0 - 128.)
Toluene-d8	BTEX-8260	116.	(53.4 - 163.)
Bromofluorobenzene	NAP-8260	123.	(59.7 - 159.)
Dibromofluoromethane	NAP-8260	115.	(74.0 - 128.)
Toluene-d8	NAP-8260	116.	(53.4 - 163.)

M = Method	Method-Description
M 1	EPA 8260
M 2	EPA 8270
M 3	EPA 3550

Notes:
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U indicates that the analyte was not detected at a concentration greater than the detection limit.
* indicates that a quality control analyte recovery is outside of specified acceptance criteria.

This data report has been prepared and reviewed in accordance with General Engineering Laboratories standard operating procedures. Please direct any questions to your Project Manager, Karen Blakeney at (803) 769-7386.

Karen Blakeney
Reviewed By

GENERAL ENGINEERING LABORATORIES

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Laboratory Certifications

STATE	GEL	EPI
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NC	233	
SC	10120	10582
TN	02934	02934

Client: Supervisor of Ship Building & Conversion
SUPSHIP-Portsmouth Detachment-Env.
1899 North Hobson Ave.
North Charleston, South Carolina 29405-2106
Contact: Mr. Bill Hiers
Project Description: SUPSHIP-Portsmouth Detachment

cc: NPWC00196 Report Date: October 17, 1996

Sample ID	: SPORT0191-3
Lab ID	: 9610069-03
Matrix	: GroundH2O
Date Collected	: 10/02/96
Date Received	: 10/02/96
Priority	: Routine
Collector	: Client

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	M
Volatile Organics											
BTEX - 4 items											
Benzene	U	0.320	1.00	2.00	ug/l	1.0	RMB	10/10/96	1113	91989	1
Ethylbenzene	U	0.00	1.00	2.00	ug/l	1.0					
Toluene	U	0.250	1.00	2.00	ug/l	1.0					
Xylenes (TOTAL)	U	0.00	1.00	4.00	ug/l	1.0					
Methyl Tert Butyl Ether	U	0.00	1.00	2.00	ug/l	1.0					
Naphthalene	U	0.00	1.00	2.00	ug/l	1.0					
Extractable Organics											
Polynuclear Aromatic Hydrocarbons - 16 items											
Acenaphthene	J	80.0	50.0	100	ug/l	10.	JCB	10/15/96	1403	91775	2
Acenaphthylene	U	0.00	50.0	100	ug/l	10.					
Anthracene	U	0.00	50.0	100	ug/l	10.					
Benzo(a)anthracene	J	87.0	50.0	100	ug/l	10.					
Benzo(a)pyrene	J	54.0	50.0	100	ug/l	10.					
Benzo(b)fluoranthene	J	94.0	50.0	100	ug/l	10.					
Benzo(ghi)perylene	U	0.00	50.0	100	ug/l	10.					
Benzo(k)fluoranthene	U	0.00	50.0	100	ug/l	10.					
Chrysene	J	58.0	50.0	100	ug/l	10.					
Dibenzo(a,h)anthracene	U	0.00	50.0	100	ug/l	10.					
Fluoranthene		396	50.0	100	ug/l	10.					
Fluorene	U	15.0	50.0	100	ug/l	10.					
Indeno(1,2,3-c,d)pyrene	U	0.00	50.0	100	ug/l	10.					
Naphthalene	U	0.00	50.0	100	ug/l	10.					
Phenanthrene		338	50.0	100	ug/l	10.					
Pyrene		303	50.0	100	ug/l	10.					

GENERAL ENGINEERING LABORATORIES

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Laboratory Certifications

STATE	GEL	EPI
FL	E87156/87294	E87472/87458
NC	233	
SC	10120	10582
TN	02934	02934

Client: Supervisor of Ship Building & Conversion
SUPSHIP-Portsmouth Detachment-Env.
1899 North Hobson Ave.
North Charleston, South Carolina 29405-2106
Contact: Mr. Bill Hiers
Project Description: SUPSHIP-Portsmouth Detachment

cc: NPWC00196 Report Date: October 17, 1996

Sample ID : SPORT0191-3

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	M
The following prep procedures were performed:											
GC/MS Base/Neutral Compounds							DDT	10/07/96	1550	91775	3

Surrogate Recovery	Test	Percent%	Acceptable Limits
2-Fluorobiphenyl	M610	72.0	(43.0 - 108.)
Nitrobenzene-d5	M610	56.0	(35.0 - 111.)
p-Terphenyl-d14	M610	62.0	(33.0 - 125.)
Bromofluorobenzene	BTEX-8260	90.8	(80.0 - 128.)
Dibromofluoromethane	BTEX-8260	103.	(67.7 - 135.)
Toluene-d8	BTEX-8260	91.6	(76.8 - 122.)
Bromofluorobenzene	MTBE-8260	90.8	(80.0 - 128.)
Dibromofluoromethane	MTBE-8260	103.	(67.7 - 135.)
Toluene-d8	MTBE-8260	91.6	(76.8 - 122.)
Bromofluorobenzene	NAP-8260	90.8	(80.0 - 128.)
Dibromofluoromethane	NAP-8260	103.	(67.7 - 135.)
Toluene-d8	NAP-8260	91.6	(76.8 - 122.)

M = Method	Method-Description
M 1	EPA 8260
M 2	EPA 8270
M 3	EPA 3510

Notes:
The qualifiers in this report are defined as follows:
ND indicates that the analyte was not detected at a concentration greater than the detection limit.
J indicates presence of analyte at a concentration less than the reporting limit (RL) and greater than the detection limit (DL).
U indicates that the analyte was not detected at a concentration greater than the detection limit.
* indicates that a quality control analyte recovery is outside of specified acceptance criteria.

GENERAL ENGINEERING LABORATORIES

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Laboratory Certifications

STATE	GEL	EPI
FL	E87156/87294	E87472/87456
NC	233	
SC	10120	10582
TN	02934	02934

Client: Supervisor of Ship Building & Conversion
SUPSHIP-Portsmouth Detachment-Env.
1899 North Hobson Ave.
North Charleston, South Carolina 29405-2106
Contact: Mr. Bill Hiers
Project Description: SUPSHIP-Portsmouth Detachment

cc: NPWC00196

Report Date: October 17, 1996

Sample ID : SPORT0191-3

M = Method	Method-Description

This data report has been prepared and reviewed in accordance with General Engineering Laboratories standard operating procedures. Please direct any questions to your Project Manager, Karen Blakeney at (803) 769-7386.

Karen Blakeney
Reviewed By

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9610069-03

GENERAL ENGINEERING LABORATORIES

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Laboratory Certifications

STATE	CEL	EPI
FL	E87156/87294	E87472/87458
NC	223	
SC	10120	10582
TN	02934	02934

Client: Supervisor of Ship Building & Conversion
SUPSHIP-Portsmouth Detachment-Env.
1899 North Hobson Ave.
North Charleston, South Carolina 29405-2106
Contact: Mr. Bill Hiers
Project Description: SUPSHIP-Portsmouth Detachment

cc: NPWC00196 Report Date: October 14, 1996

Sample ID : SPORT0191-4
Lab ID : 9610069-04
Matrix : Soil
Date Collected : 10/02/96
Date Received : 10/02/96
Priority : Routine
Collector : Client

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	M
Volatile Organics											
BTEX - 4 items											
Benzene	U	0.00	1.00	2.00	ug/kg	1.0	JAC	10/11/96	1134	92006	1
Ethylbenzene	U	0.00	1.00	2.00	ug/kg	1.0					
Toluene	U	0.360	1.00	2.00	ug/kg	1.0					
Xylenes (TOTAL)	U	0.00	1.00	4.00	ug/kg	1.0					
Naphthalene	U	0.00	1.00	2.00	ug/kg	1.0					
Extractable Organics											
Polynuclear Aromatic Hydrocarbons - 16 items											
Acenaphthene	U	0.00	163	330	ug/kg	1.0	BDG	10/10/96	2346	91877	2
Acenaphthylene	U	0.00	163	330	ug/kg	1.0					
Anthracene	U	0.00	163	330	ug/kg	1.0					
Benzo(a)anthracene	U	0.00	163	330	ug/kg	1.0					
Benzo(a)pyrene	U	0.00	163	330	ug/kg	1.0					
Benzo(b)fluoranthene	U	0.00	163	330	ug/kg	1.0					
Benzo(ghi)perylene	U	0.00	163	330	ug/kg	1.0					
Benzo(k)fluoranthene	U	0.00	163	330	ug/kg	1.0					
Chrysene	U	0.00	163	330	ug/kg	1.0					
Dibenzo(a,h)anthracene	U	0.00	163	330	ug/kg	1.0					
Fluoranthene	U	0.00	163	330	ug/kg	1.0					
Fluorene	U	0.00	163	330	ug/kg	1.0					
Indeno(1,2,3-c,d)pyrene	U	0.00	163	330	ug/kg	1.0					
Naphthalene	U	0.00	163	330	ug/kg	1.0					
Phenanthrene	U	0.00	163	330	ug/kg	1.0					
Pyrene	U	0.00	163	330	ug/kg	1.0					

The following prep procedures were performed:
GC/MS Base/Neutral Compounds

DDT 10/08/96 2345 91877 3

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9610069-04

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Laboratory Certifications

STATE	GEL	EPI
FL	E87156/87294	E87472/87458
NC	233	
SC	10120	10582
TN	02934	02934

Client: Supervisor of Ship Building & Conversion
SUPSHIP-Portsmouth Detachment-Env.
1899 North Hobson Ave.
North Charleston, South Carolina 29405-2106
Contact: Mr. Bill Hiers
Project Description: SUPSHIP-Portsmouth Detachment

cc: NPWC00196 Report Date: October 14, 1996

Sample ID : SPORT0191-4

Surrogate Recovery	Test	Percent%	Acceptable Limits
2-Fluorobiphenyl	M610	54.9	(30.0 - 115.)
Nitrobenzene-d5	M610	44.9	(23.0 - 120.)
p-Terphenyl-d14	M610	99.6	(37.3 - 128.)
Bromofluorobenzene	BTEX-8260	112.	(59.7 - 159.)
Dibromofluoromethane	BTEX-8260	82.0	(74.0 - 128.)
Toluene-d8	BTEX-8260	110.	(53.4 - 163.)
Bromofluorobenzene	NAP-8260	112.	(59.7 - 159.)
Dibromofluoromethane	NAP-8260	82.0	(74.0 - 128.)
Toluene-d8	NAP-8260	110.	(53.4 - 163.)

M = Method	Method Description
M 1	EPA 8260
M 2	EPA 8270
M 3	EPA 3550

Notes:
The qualifiers in this report are defined as follows:
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J indicates presence of analyte at a concentration less than the reporting limit (RL) and greater than the detection limit (DL).
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This data report has been prepared and reviewed in accordance with General Engineering Laboratories standard operating procedures. Please direct any questions to your Project Manager, Karen Blakeney at (803) 769-7386.

Karen Blakeney
Reviewed By

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Laboratory Certifications

STATE	CHEL	EPA
FL	E87156/87294	E87472/87458
NC	233	
SC	10120	10582
TN	02934	02934

Client: Supervisor of Ship Building & Conversion
SUPSHIP-Portsmouth Detachment-Env.
1899 North Hobson Ave.
North Charleston, South Carolina 29405-2106
Contact: Mr. Bill Hiers
Project Description: SUPSHIP-Portsmouth Detachment

cc: NPWC00196 Report Date: October 14, 1996

Sample ID : SPORT0191-5
Lab ID : 9610069-05
Matrix : Soil
Date Collected : 10/02/96
Date Received : 10/02/96
Priority : Routine
Collector : Client

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	M
Volatile Organics											
BTEX - 4 items											
Benzene	U	0.00	1.00	2.00	ug/kg	1.0	JAC	10/11/96	1204	92006	1
Ethylbenzene	U	0.00	1.00	2.00	ug/kg	1.0					
Toluene	U	0.460	1.00	2.00	ug/kg	1.0					
Xylenes (TOTAL)	U	0.00	1.00	4.00	ug/kg	1.0					
Naphthalene	U	0.00	1.00	2.00	ug/kg	1.0					
Extractable Organics											
Polynuclear Aromatic Hydrocarbons - 16 items											
Acenaphthene	U	0.00	165	330	ug/kg	1.0	BDG	10/11/96	0019	91877	2
Acenaphthylene	U	0.00	165	330	ug/kg	1.0					
Anthracene	U	0.00	165	330	ug/kg	1.0					
Benzo(a)anthracene	U	0.00	165	330	ug/kg	1.0					
Benzo(a)pyrene	U	0.00	165	330	ug/kg	1.0					
Benzo(b)fluoranthene	U	0.00	165	330	ug/kg	1.0					
Benzo(ghi)perylene	U	0.00	165	330	ug/kg	1.0					
Benzo(k)fluoranthene	U	0.00	165	330	ug/kg	1.0					
Chrysene	U	0.00	165	330	ug/kg	1.0					
Dibenzo(a,h)anthracene	U	0.00	165	330	ug/kg	1.0					
Fluoranthene	U	0.00	165	330	ug/kg	1.0					
Fluorene	U	0.00	165	330	ug/kg	1.0					
Indeno(1,2,3-c,d)pyrene	U	0.00	165	330	ug/kg	1.0					
Naphthalene	U	0.00	165	330	ug/kg	1.0					
Phenanthrene	U	0.00	165	330	ug/kg	1.0					
Pyrene	U	0.00	165	330	ug/kg	1.0					

The following prep procedures were performed:
GC/MS Base/Neutral Compounds

DDT 10/08/96 2345 91877 3

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9610069-05

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Laboratory Certifications

STATE	GEL	EPI
FL	E87156/87294	E87472/87458
NC	233	
SC	10120	10582
TN	02934	02934

Client: Supervisor of Ship Building & Conversion
SUPSHIP-Portsmouth Detachment-Env.
1899 North Hobson Ave.
North Charleston, South Carolina 29405-2106
Contact: Mr. Bill Hiers
Project Description: SUPSHIP-Portsmouth Detachment

cc: NPWC00196 Report Date: October 14, 1996

Sample ID : SPORT0191-5

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	M

Comments:
Volatile Organics contained matrix interferences.

Surrogate Recovery	Test	Percent%	Acceptable Limits
2-Fluorobiphenyl	M610	89.4	(30.0 - 115.)
Nitrobenzene-d5	M610	67.6	(23.0 - 120.)
p-Terphenyl-d14	M610	117.	(37.3 - 128.)
Bromofluorobenzene	BTEX-8260	113.	(59.7 - 159.)
Dibromofluoromethane	BTEX-8260	86.0	(74.0 - 128.)
Toluene-d8	BTEX-8260	112.	(53.4 - 163.)
Bromofluorobenzene	NAP-8260	113.	(59.7 - 159.)
Dibromofluoromethane	NAP-8260	86.0	(74.0 - 128.)
Toluene-d8	NAP-8260	112.	(53.4 - 163.)

M = Method	Method-Description
M 1	EPA 8260
M 2	EPA 8270
M 3	EPA 3550

Notes:
The qualifiers in this report are defined as follows:
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* indicates that a quality control analyte recovery is outside of specified acceptance criteria.

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9610069-05

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Laboratory Certifications

STATE	GEL	EPI
FL	E87156/87294	E87472/87452
NC	233	
SC	10120	10582
TN	02934	02934

Client: Supervisor of Ship Building & Conversion
SUPSHIP-Portsmouth Detachment-Env.
1899 North Hobson Ave.
North Charleston, South Carolina 29405-2106
Contact: Mr. Bill Hiers
Project Description: SUPSHIP-Portsmouth Detachment

cc: NPWC00196 Report Date: October 14, 1996

Sample ID : SPORT0191-5

M = Method	Method-Description

This data report has been prepared and reviewed in accordance with General Engineering Laboratories standard operating procedures. Please direct any questions to your Project Manager, Karen Blakeney at (803) 769-7386.

Karen Blakeney
Reviewed By

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9610069-05

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Laboratory Certifications

STATE	GEL	EPI
FL	E87156/87294	E87472/87458
NC	233	
SC	10120	10582
TN	02934	02934

Client: Supervisor of Ship Building & Conversion
SUPSHIP-Portsmouth Detachment-Env.
1899 North Hotson Ave.
North Charleston, South Carolina 29405-2106
Contact: Mr. Bill Hiers
Project Description: SUPSHIP-Portsmouth Detachment

cc: NPWC00196 Report Date: October 14, 1996

Sample ID	: SPORT0191-6
Lab ID	: 9610069-06
Matrix	: Soil
Date Collected	: 10/02/96
Date Received	: 10/02/96
Priority	: Routine
Collector	: Client

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	M
Volatile Organics											
BTEX - 4 items											
Benzene	U	0.00	1.00	2.00	ug/kg	1.0	IGS2	10/09/96	1614	92006	1
Ethylbenzene	U	0.00	1.00	2.00	ug/kg	1.0					
Toluene	U	0.940	1.00	2.00	ug/kg	1.0					
Xylenes (TOTAL)	U	0.00	1.00	4.00	ug/kg	1.0					
Naphthalene	U	0.770	1.00	2.00	ug/kg	1.0					
Extractable Organics											
Polynuclear Aromatic Hydrocarbons - 16 items											
Acenaphthene	U	0.00	166	332	ug/kg	1.0	BDG	10/11/96	0051	91877	2
Acenaphthylene	U	0.00	166	332	ug/kg	1.0					
Anthracene	U	0.00	166	332	ug/kg	1.0					
Benzo(a)anthracene		362	166	332	ug/kg	1.0					
Benzo(a)pyrene		488	166	332	ug/kg	1.0					
Benzo(b)fluoranthene		458	166	332	ug/kg	1.0					
Benzo(ghi)perylene		1290	166	332	ug/kg	1.0					
Benzo(k)fluoranthene	J	212	166	332	ug/kg	1.0					
Chrysene		452	166	332	ug/kg	1.0					
Dibenzo(a,h)anthracene	J	249	166	332	ug/kg	1.0					
Fluoranthene		740	166	332	ug/kg	1.0					
Fluorene	U	0.00	166	332	ug/kg	1.0					
Indeno(1,2,3-c,d)pyrene		720	166	332	ug/kg	1.0					
Naphthalene	U	0.00	166	332	ug/kg	1.0					
Phenanthrene		438	166	332	ug/kg	1.0					
Pyrene		764	166	332	ug/kg	1.0					

The following prep procedures were performed:
GC/MS Base/Neutral Compounds

DDT 10/08/96 2345 91877 3

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9610069-06

GENERAL ENGINEERING LABORATORIES

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Laboratory Certifications

STATE	GEL	EPI
FL	E87156/87294	E87472/87458
NC	231	
SC	10120	10582
TN	02934	02934

Client: Supervisor of Ship Building & Conversion
SUPSHIP-Portsmouth Detachment-Env.
1899 North Hobson Ave.
North Charleston, South Carolina 29405-2106
Contact: Mr. Bill Hiers
Project Description: SUPSHIP-Portsmouth Detachment

cc: NPWC00196 Report Date: October 14, 1996

Sample ID : SPORT0191-6

Surrogate Recovery	Test	Percent%	Acceptable Limits
2-Fluorobiphenyl	M610	67.0	(30.0 - 115.)
Nitrobenzene-d5	M610	49.2	(23.0 - 120.)
p-Terphenyl-d14	M610	108.	(37.3 - 128.)
Bromofluorobenzene	BTEX-8260	116.	(59.7 - 159.)
Dibromofluoromethane	BTEX-8260	121.	(74.0 - 128.)
Toluene-d8	BTEX-8260	119.	(53.4 - 163.)
Bromofluorobenzene	NAP-8260	116.	(59.7 - 159.)
Dibromofluoromethane	NAP-8260	121.	(74.0 - 128.)
Toluene-d8	NAP-8260	119.	(53.4 - 163.)

M = Method	Method-Description
M 1	EPA 8260
M 2	EPA 8270
M 3	EPA 3550

Notes:
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J indicates presence of analyte at a concentration less than the reporting limit (RL) and greater than the detection limit (DL).
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Karen Blakeney
Reviewed By

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9610069-06

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CHAIN OF CUSTODY RECORD

General Engineering Laboratories, Inc.
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Charleston, South Carolina 29414
P.O. Box 30712
Charleston, South Carolina 29417
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Page 1 of 1

9610069

Client Name/Facility Name: SPORTENVDETCHASN

Collected by/Company: R. ADKINS, SPORTENVDETCHASN

	SAMPLE ID	DATE	TIME	WELL	SOIL	COMP	GRAB	# OF CONTAINERS	pH, conductivity	TOC/DOC	TOX	Chloride, Fluoride, Sulfide	Nitrite/Nitrate	VOC - Specify Method required	METALS - specify	Pesticide	Herbicide	Total Phenol	Acid Extractables	B/N Extractables	PCB's	Cyanide	Coliform - specify type	BTEX & NAPTH	PAH	Remarks
-01	SPORTO191-1	10/2/96	1015		X		X	2																+	+	UST 650-1 SOIL
-02	SPORTV91-2	10/2/96	1015		X		X	2																X	X	UST 650-2 SOIL
-03	SPORTO191-3	10/2/96	1015				X	5																1	X	UST 650-3 GW
-04	SPORTV91-4	10/2/96	1015		X		X	2																X	X	UST 650-4 SOIL
-05	SPORTO191-5	10/2/96	1015		X		X	2																X	X	UST 650-5 SOIL
-06	SPORTO191-6	10/2/96	1015		X		X	2																X	X	UST 650-6 SOIL
07	SPORTO191-7	10/2/96	1015				X	3																1		VOA TRIP BLANK UST 650 WATER
08	SPORTO191-8	10/2/96	1015				X	1																1		VOA TRIP BLANK UST 650 SOIL

23526

Remarks

1. BTEX & NAPTH & MTBE

Relinquished by:	Date:	Time:	Received by:	Relinquished by:	Date:	Time:	Received by:
	10/2/96	1130			10/2/96	1415	
Relinquished by:	Date:	Time:	Received by lab by:	Date:	Time:	Remarks:	
	10/2/96	14:45		10-2-96	1445	Temp 6.C	

White = sample collector Yellow = file Pink = with report

Attachment III

Certificate of Disposal (tank)

UST Certificate of Disposal

CONTRACTOR

Supervisor of Shipbuilding, Conversion and Repair, USN
Portsmouth, VA
Environmental Detachment Charleston
1899 North Hobson Avenue
North Charleston 29405-2106

Telephone (803) 743-6482

TANK ID & LOCATION

UST Bldg 650, Charleston Naval Base, Halsey St., N. Charleston, SC.

DISPOSAL LOCATION

Bldg. 1601 Tank Cleaning
& Disposal Area
Charleston Naval Complex

TYPE OF TANK	SIZE (GAL)
Fuel oil	1000 gal.

CLEANING/DISPOSAL METHOD

The tank was cut open on both ends, cleaned with a steam cleaner, cut into sections, and disposed of as recyclable scrap metal.

DISPOSAL CERTIFICATION

I certify that the above tank has been properly cleaned and disposed of as recyclable scrap metal.

Sidney C. Ladson 1-7-97

Sidney Ladson (Name) (Date)